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Additional Philippine Polyporaceae

WILLIAM ALPHONSO MURRILL

A list of Philippine polypores recently added to the herbarium of the New York Botanical Garden was published in this journal about a year ago (Bull. Torrey Club **34**: 465-481. 1907). In April, 1908, a large and valuable shipment of Philippine fungi, 637 packets in all, was received for determination from the Bureau of Science, Manila, through Mr. Elmer D. Merrill, botanist. Most of these are duplicates and will become permanent additions to the Garden herbarium, but a few, not in duplicate, will be returned to Manila. The following list includes the pileate polypores of this collection, arranged in alphabetical order under their tribes.

The localities here included are very varied, representing a large number of the islands and many different altitudes and latitudes. The principal collectors are as follows: Messrs. Elmer D. Merrill, A. D. E. Elmer, E. B. Copeland, H. M. Curran, M. L. Merritt, H. N. Whitford, Eugenio Fénix, Maximo Ramos, L. Mangubat, and Mrs. Mary S. Clemens. Private numbers or letters follow the name of the collector, those given in parenthesis being assigned by the Bureau of Science or the Bureau of Forestry. Synonyms listed in my former paper are not repeated here except in connection with discussions relative to additional knowledge or notes of interest.

Tribe POLYPOREAE

Bjerkandera adusta (Willd.) Karst. Medd. Soc. Faun. Fl. Fenn **5**: 38. 1879.

Mindanao: Mt. Apo, 2000 m., Davao, *Copeland 1075*; Camp Keithley, Lake Lanao, *Clemens bj*.

Coltricia benguetensis Murrill, sp. nov.

Sporophore consisting of several pilei arising on short stipes from a thickened base attached to the host at two points, the pilei being in all stages of development; pileus flabelliform to reniform, usually umbonate behind at the point of attachment, slightly con-

vex above and below, corky, rigid, $3-4 \times 4-5 \times 0.5-0.8$ cm.; surface anoderm, subglabrous, uneven, neither sulcate nor zonate, fulvous behind, ferruginous in front; margin broadly sterile, rather thick, rounded, ferruginous, context ferruginous, corky, zonate, homogeneous, 5 mm. thick; tubes 1-2 mm. long, pallid within, mouths cinereous-fuscous, glistening, regular, angular, 5 to a mm., edges thin, subentire: hyphae ferruginous, $2-3 \mu$; cystidia scanty, pointed, straight, curved or sinuous, bulbous at the base, dark fulvous, $25-40 \mu$ long, $7-10 \mu$ thick at the thickest part.

Type collected about prostrate logs of *Pinus insularis* at Baguio, Benguet Province, Luzon, October-November, 1905, by E. D. Merrill, (5003). Also collected on the same host in Benguet Province, March, 1904, by A. D. E. Elmer, 6047.

CORIOLOPSIS BADIA (Berk.) Murrill, Bull. Torrey Club **34**: 466. 1907. *P. asper* Jungh., *P. strigatus* Berk., and *P. squamaeformis* Berk. hardly differ specifically from this species. Specimens have also been called *P. brunneopictus* Berk., described from Brazil. In the two collections made by Mrs. Clemens in Mindanao, the pores are much larger than usual, being at least twice their normal size.

Luzon: Montalban, Rizal Province, *Merrill*, (5085); Mt. Marivelas, Bataan Province, *Copeland* 158; Bauang, Union Province, *Elmer* 5710; Mt. Arayat, Pampanga Province, *Merrill*, (5031); Santa Maria Mavitac, Laguna Province, *Curran*, (8930). Mindanao: Camp Keithley, Lake Lanao, *Clemens av, ay*.

CORIOLOPSIS CAPERATA (Berk.) Murrill, N. Am. Flora **9**: 77.

1908. *Polyporus caperatus* Berk. Ann. & Mag. Nat. Hist.

3: 391. 1839. (Type from the Philippines.)

Mindanao: Mt. Apo, 1300 m., Davao, *Copeland* 1178.

Coriolopsis Copelandi Murrill, sp. nov.

Pileus subimbricate, dimidiate, sessile, laterally confluent, broadly attached, very slightly flexible, conchate, $3-4 \times 5-6 \times 0.3-0.5$ cm.; surface glabrous, thinly encrusted, very shallowly sulcate, slightly radiate-rugose when dry, opaque, very dark brown or black; margin rather thick, sterile, entire: context punky, dark fulvous, 1-2 mm. thick; tubes 3-4 mm. long, dark brown within, hymenium sordid brown, almost blackish in some specimens, cracking when dry, mouths minute, thin-walled, angular, 7-9 to a mm., edges entire to slightly fimbriate.

Type collected on dead wood in Davao, Mindanao, March 28, 1904, by E. B. Copeland 714. Also collected at Todaya, Davao, Mindanao, April 25, 1904, by E. B. Copeland, (1214), and on a dicotyledonous log on the Lamao River, Luzon, February 2, 1904, by E. B. Copeland, 147.

Coriolopsis bataanensis Murrill, sp. nov.

Pileus thin, soft, slightly flexible, rather fragile, dimidiate to flabelliform, often laterally extended by confluence, narrowly attached, conchate, $3-4 \times 3-10 \times 0.3-0.5$ cm.; surface spongy-tomentose, anoderm, very uneven, sulcate, subzonate, fulvous, varying to isabelline or fuliginous in places; margin rather thin, undulate, isabelline: context 2-4 mm. thick, two-layered, soft and dull fulvous above, considerably harder and ochraceous next to the tubes, which are 1-2 mm. long, bay within, mouths glistening, isabelline to bay, distinctly angular, 3-4 to a mm., quite variable in size, edges thin, entire: spores smooth, ovoid, hyaline, rather abundant, $5 \times 4 \mu$; hyphae subhyaline, extremely fragile; cystidia none.

Type collected on dead wood on Mt. Mariveles, 230 m., Bataan Province, Luzon, January 29, 1904, by E. B. Copeland, 143.

CORIOLOPSIS DERMATODES (Lév.) Murrill, Bull. Torrey Club 34: 466. 1907. *Polyporus xeranticus* Berk., described from India, is hardly different from this species.

Mindanao: Camp Keithley, Lake Lanao, *Clemens*, two collections. Luzon: Sablan, Benguet Province, *Elmer* 6183; Bauang, Union Province, *Elmer* 5747; Bosoboso, Rizal Province, *Ramos*, (2158).

Coriolopsis melleoflava Murrill, sp. nov.

Pileus thin, coriaceous, very flexible, broadly effused, narrowly attached, dimidiate to subcircular, 2-3 cm. long, 1 mm. thick, extending several centimeters laterally by confluence; surface clothed with dense short tomentum, many times narrowly concentrically sulcate, melleoflavous, slightly brownish behind; margin undulate or irregularly notched or lobed, thin, sterile, pallid: context melleoflavous, membranous; tubes less than a mm. long, nearly white within, mouths pale melleous, irregular, averaging 2 to a mm., edges notched and more or less elongated, somewhat irpiciform.

Type collected on dead wood at Zamboanga, Mindanao, January, 1908, by H. N. Whitford and W. I. Hutchinson, (9238).

CORIOLOPSIS OCCIDENTALIS (Kl.) Murrill, Bull. Torrey Club **32**: 358. 1905.

Mindanao: Camp Keithley, Lake Lanao, *Clemens ap, m*; Pollok Harbor, *Copeland 331*. Negros: Gimagaan River, *Copeland 4*. Mindoro: Bongabong River, *Whitford 1440, 1441*. Batanes: *Fénix*, (3868), (3871), (3885), (3888). Luzon: Twin Peaks, Benguet Province, *Elmer 6356*; Lamao Forest Reserve, *Curran (7397)*.

CORIOLOPSIS SEMILACCATA (Berk.) Murrill, Bull. Torrey Club **34**: 466. 1907.

Luzon: Lamao, Bataan Province, *Copeland 172, Curran, (7521)*; Bosoboso, Rizal Province, *Ramos, (1217)*; Mauban, Tayabas Province, *Curran, (9590)*. Mindoro: Mt. Halcon, *Merrill, (6119)*. Mindanao: Camp Keithley, Lake Lanao, *Clemens ac* and one other collection; Davao, *Copeland 552*. Negros: Gimagaan River, *Copeland 14*.

Corioloopsis subcrocata Murrill, sp. nov.

Pileus coriaceous, membranous, flaccid, elastic, effused-reflexed: the reflexed portion dimidiate, applanate, 1–2 cm. long and 1 mm. thick, extending laterally several centimeters; surface pale isabelline, nearly glabrous, very slightly zonate; margin thin, concolorous, entire, sterile: context pale isabelline, soft, very thin; tubes less than 1 mm. long, paler than the context, mouths regular, subcircular, glistening, 3 to a mm., edges firm, corky, entire.

Type collected on a dead trunk and branches on Mt. Mariveles, Bataan Province, Luzon, January 1, 1904, by E. D. Merrill, (3694). CORIOLUS ATYPUS (Lév.) Pat. Tax. Hymén. 94. 1900.

Palawan: Victoria Peak, *Curran, (7484)*. Mindoro: Mt. Halcon, *Merrill, (6121), (6122)*. Luzon: Rizal Province, *Ramos, (1859), (1864)*; Lamao River, Bataan Province, *Copeland 171, 179*; Mt. Mariveles, Bataan Province, *Copeland 169*; Zambales Province, *Curran, (7020)*; Mauban, Tayabas Province, *Curran, (9587)*. Mindanao: Zamboanga, *Whitford & Hutchinson, (9302)*; Malita, Davao, *Copeland 683*.

Coriolus Clemensiae Murrill, sp. nov.

Pileus rather thin, rigid, reniform, conchate, attached by a compressed projecting base resembling a stipe, $6 \times 8 \times 0.3$ cm., base $2 \times 2 \times 0.3$ cm.; surface glabrous, zonate, radiately furrowed

white with a slightly grayish tinge, the narrow zones shining; margin rather thick, fertile, reddish brown in dried specimens, subentire: context milk-white, fibrous, 1–2 mm. thick; tubes pale ochraceous when dry, 2 mm. long, mouths concolorous, 4–5 to a mm., circular to angular, edges firm, rather thick, entire: spores subglobose, smooth, hyaline, 3–4 μ ; hyphae hyaline, 3–4 μ ; cystidia none.

Type collected on dead wood at Camp Keithley, Lake Lanao, Mindanao, September–October, 1907, by Mary S. Clemens, *v*.

Coriolus Currani Murrill, sp. nov.

Pileus flabelliform, thin, somewhat flexible, almost plane above, slightly concave below, affixed by a short tubercle resembling the pileus in surface and substance, 3–5 \times 4–6 \times 0.1–0.3 cm.; surface isabelline to wood-brown, glabrous, shining, multizonate, smooth between the shallow concentric furrows; margin acute, entire or undulate, pallid, sterile in a narrow distinct band: context white to pallid, homogeneous, punky, 1–1.5 mm. thick; tubes white to pale yellowish throughout, 1–2 mm. long, mouths glistening, circular, very regular, 5–6 to a mm., edges firm, entire, obtuse.

Type collected on dead wood on Mt. Maquiling, Laguna Province, Luzon, October 23, 1907, by H. M. Curran and M. L. Merritt, (8965). Also collected as follows: Mt. Maquiling, Laguna Province, Luzon, October 23, 1907, by H. M. Curran and M. L. Merritt, (8964); Rizal Province, Luzon, January, 1907, by Maximo Ramos, (1866); Batangas Province, Luzon, November, 1907, by H. M. Curran and M. L. Merritt.

CORIOLOUS ELONGATUS (Berk.) Pat. Tax. Hymén. 94. 1900.

Luzon: Santa Maria Mavitac, Laguna Province, *Curran*, (8909).

CORIOLOUS MAXIMUS (Mont.) Murrill, Bull. Torrey Club 34: 467. 1907.

Mindanao: Mungalaron, Davao, *Copeland* 712; Camp Keithley, Lake Lanao, *Clemens a, k, s, aq*; Port Banga, Zamboanga District, *Whitford & Hutchinson*, (9411). Luzon: Lamao River, Bataan Province, *Copeland* 174; Mt. Malaraya, Tayabas Province, *Curran & Merritt*, (8958); Zambales Province, *Curran* (7025). Balabac: *Mangubat*, (534). Mindoro: Bongabong River, *Whitford* 1438.

CORIOLOUS MURINUS (Lév.) Pat. Tax. Hymén. 94. 1900.

Luzon: Lamao River, Bataan Province, *Copeland* 170, 185,

247; Mauban, Tayabas Province, *Curran*, (9591), (9592); Paete-Piapi, Laguna and Tayabas Provinces, *Curran*, (9640), (9644); Caraga, Surigao Province, *Merrill*, (5460). Mindanao: Camp Keithley, Lake Lanao, *Clemens c*; Davao, *Copeland* 458, 925. Negros: Gimagaan River, *Copeland* 5. Lumbacan: *Merrill* (5281).

CORIOLUS NIGROMARGINATUS (Schw.) Murrill, Bull. Torrey Club **32**: 649. 1906.

Mindoro: Mt. Halcon, *Merrill*, (6116). Negros: Gimagaan River, *Copeland* 9. Luzon: Santa Maria Mavitac, Laguna Province, *Curran*, (8927); Antipolo, Rizal Province, *Curran*, (7042); Montalban, Rizal Province, *Merrill*, (5081). Mindanao: Malita, Davao, *Copeland* 668; Davao, *Copeland* 876; Camp Keithley, Lake Lanao, *Clemens N, af, cg, r*.

CORIOLUS PROLIFICANS (Fr.) Murrill, N. Am. Flora **9**: 27. 1907.

Luzon: Lamao Forest Reserve, Bataan Province, *Curran*, (7396).

Coriolus perpusillus Murrill, sp. nov.

Pileus very small, irregular, laterally confluent, dimidiate, broadly attached, 0.5–1 × 1.5 × 0.2–0.3 cm., surface milk-white, azonate, glabrous, not polished; margin concolorous, entire, sterile, rather thick: context milk-white, punky, fibrous, 1 mm. thick; tubes white to slightly yellowish, very thin-walled, 1 mm. or less long, mouths glistening, nearly white, regular, angular, 6 to a mm., edges thin, toothed or fimbriate.

Type collected on dead wood at Camp Keithley, Lake Lanao, Mindanao, July, 1907, by Mary S. Clemens, *bf*.

Coriolus rubritinctus Murrill, sp. nov.

Pileus small, slightly flexible, obovate to flabelliform, more or less cuneate behind, plane above and below, laterally confluent at times, 1.5–2 × 1.5–2.5 × 0.1–0.3 cm.; surface faintly zonate, smooth, glabrous, opaque, ochraceous-fulvous with reddish brown blotches; margin abruptly acute, fertile, concolorous, entire, slightly inflexed on drying: context pallid, punky-fibrous, 1 mm. or less thick; tubes pallid, 2 mm. long, mouths glistening, ochraceous to discolored, regular, angular, 4–5 to a mm., edges corky, thin, entire: spores globose, smooth, hyaline, 2.5–3 μ ; hyphae hyaline, 3 μ ; cystidia none.

Type collected on dead wood on Mt. Halcon, Mindoro, November, 1906, by E. D. Merrill (6117).

Coriolus subvernicipes Murrill, sp. nov.

Pileus flabelliform or reniform, subimbricate, thickest behind, becoming very thin and flexible at the margin, narrowly attached, somewhat irregular and plicate, $2-4 \times 4-7 \times 0.1-0.6$ cm.; surface lustrous, glabrous, multizone, reddish brown, isabelline in a few zones, finely radiate-striate; margin very thin, slightly paler, broadly sterile, notched or irregular: context milk-white, tough, 1-5 mm. thick; tubes short, white to pale yellowish, firm, 1 mm. or less long, mouths glistening, nearly circular, regular, 4-5 to a mm., edges rather thin, entire.

Type collected on dead *Cassia* at Bosoboso, Rizal Province, Luzon, February, 1907, by Maximo Ramos, (2144). No. (2145) is the same species, collected at the same time.

Cycloporellus barbatus Murrill, sp. nov.

Pileus reniform, conchate, thin, flexible, imbricated at times, attached by a short umbo, $3-4 \times 5-6 \times 0.05-0.1$ cm.; surface multizone, shallowly concentrically sulcate, light brown to dark reddish brown, covered with coarse, blackish brown, appressed hairs 2 mm. or more in length; margin thin, pallid, entire, narrowly sterile: context very thin, fibrous, containing blackish, horny layers; tubes less than 1 mm. long, dark fulvous within, the cavities hoary, mouths regular, angular, glistening, dark brown, 6-7 to a mm., edges entire, becoming thin: spores subglobose, smooth, hyaline, $2-3 \mu$; hyphae melleous to dark fulvous, $3.5-5 \mu$; cystidia blackish brown, opaque, slender, hyaline at the tip, regular in shape, rather abundant, $15-25 \mu$ long, 4μ thick at the base, tapering to a point.

Type collected on dead wood in Zambales Province, Luzon, November-December, 1907, by H. M. Curran and M. L. Merritt, (8208).

CYCLOPORELLUS CICHORIACEUS (Fr.) Murrill, Bull. Torrey Club 34: 468. 1907. *Favolus transiens* Cesati, described from Borneo, is not distinct from this species.

Batanes: *Fenix*, (3874). Mindanao: Mt. Apo, 2000 m., Davao, *Copeland* 1067.

CYCLOPORELLUS MICROCYCLUS (Lév.) Murrill, Bull. Torrey Club 34: 468. 1907. *Polystictus xerampelinus* Kalchb., described from Australia, should be added to the synonyms of this species.

Luzon: Montalban, Rizal Province, *Merrill*, (5086); Mt. Mal-araya, Tayabas Province, *Curran & Merritt*, (8960); Rizal Province, *Ramos*, (1860), *Foxworthy*, (84); Mt. Mariveles, 333 m., Bataan Province, *Copeland* 144. Mindanao: Camp Keithley, Lake Lanao, *Clemens* *ae, ah, ca, j*.

EARLIELLA CORRUGATA (Pers.) Murrill, Bull. Torrey Club **34**: 468. 1907.

Luzon: Mount Maquiling, Laguna Province, *Merrill*, (5153); Mount Maquiling, Batangas Province, *Curran & Merritt*, (8940); Lamao River, Bataan Province, *Copeland* 164. Panay: Capiz, *Copeland* 19. Balabac: *Mangubat*, (535). Mindanao: Davao, *Copeland* 477, 518; Catalonan, Davao, *Copeland* 924; Camp Keithley, Lake Lanao, *Clemens* *cd, ao*; Caraga, Surigao Province, *Merrill*, (5459).

Favolus resinosus Murrill, sp. nov.

Pileus sessile, dimidiate, applanate, rigid, attached by a broad base, $6 \times 10 \times 1-2$ cm.; surface anoderm, glabrous, opaque, brown to black, more or less resinous, proliferous, becoming incrustated with age; margin abruptly acute, isabelline with a tinge of flesh-color, undulate or coarsely notched: context corky to indurate, brown with a reddish hue, 2-3 mm. thick; tubes 1 cm. long, large, light brown within, mouths ochraceous, subhexagonal, rigid, 1-2 mm. in diameter, radiately elongated near the margin, reaching 4 mm. at times, edges rather thick, entire: spores subglobose to ovoid, smooth, hyaline, $4-6 \mu$ long; hyphae hyaline, 3-4 μ ; cystidia none.

Type collected on dead wood at Bosoboso, Rizal Province, Luzon, July, 1906, by Maximo Ramos, (1214).

Favolus subrigidus Murrill, sp. nov.

Pileus sessile, dimidiate, thin, tough, slightly flexible, $2-3 \times 3-4 \times 0.2-0.3$ cm.; surface very finely tomentose to glabrous in zones, reddish brown behind, isabelline in front, radiate-rugose; margin thin, broadly sterile, reddish brown when dry, nearly entire: context pale isabelline, punky-fibrous, 1-2 mm. thick; tubes regular, hexagonal, very shallow in front, 1 mm. deep behind, white throughout, mouths 2 to a mm., edges rigid, entire, at first thick, becoming thinner with age.

Type collected on dead wood at Mauban, Tayabas Province, Luzon, March, 1908, by H. M. Curran, (9593).

FAVOLUS TENUIS (Hook.) Murrill, Bull. Torrey Club **32**: 100. 1905.

Luzon: Santa Maria Mavitac, Laguna Province, *Curran*, (8908), (8910), (8911), (8913); Lamao River, Bataan Province, *Copeland* 248; Sablan, Benguet Province, *Elmer* 6141, 6180; Antipolo, Rizal Province, *Curran*, (7043); Mt. Mariveles, Bataan Province, *Copeland* 158a; Irisan, Benguet Province, *Elmer* 5947; Rizal Province, *Ramos*, (1862); Montalban, Rizal Province, *Merrill*, (5090). Camiguin: Babuyanes, *Fénix*, (4153), (4156), (4157). Babuyan: *Fénix*, (3931). Batanes: *Fénix*, (3889). Mindanao: Davao, *Copeland* 494, 832; San Ramon, Zamboanga District, *Copeland*; Camp Keithley, Lake Lanao, *Clemens P*, *av*.

FAVOLUS WIGHTII (Kl.) Ricker, Philipp. Jour. Sci. **1**: Suppl. 286. 1906.

LUZON: Lamao Forest Reserve, Bataan Province, *Curran*, (7388); Lamao, Bataan Province, *Curran*, (7527); Mt. Mariveles, Bataan Province, *Merrill*, (3692); Mauban, Tayabas Province, *Curran*, (9589); Mt. Malaraya, Tayabas Province, *Curran & Merritt*, (8956). Mindanao: Davao, *Copeland* 635.

FUNALIA FUNALIS (Fr.) Pat. Tax. Hymén. 95. 1900. This species is not very distinct from *Funalia villosa*.

Luzon: Bulacan Province, *Curran*, (7181); Twin Peaks, Benguet Province, *Elmer* 6355 (specimen young and doubtfully referred to this species).

FUNALIA LEONINA (Kl.) Pat. Tax. Hymén. 95. 1900. *Polyporus Dybowskii* Pat. Bull. Soc. Myc. Fr. **8**: 53. *pl.* 7. *f.* 6. 1892. Luzon: Montalban, Rizal Province, *Merrill*, (5082).

FUNALIA PHILIPPINENSIS Murrill, Bull. Torrey Club **34**: 469. 1907.

Luzon: Lamao, Bataan Province, *Copeland* 157.

HAPALOPILUS GILVUS (Schw.) Murrill, Bull. Torrey Club **31**: 418. 1904.

Luzon: Mt. Mariveles, Bataan Province, *Merrill*, (3697); Lamao River, Bataan Province, *Copeland* 191.

HAPALOPILUS LICNOIDES (Mont.) Murrill, Bull. Torrey Club **31**: 417. 1904.

Luzon : Mt. Mariveles, 230 m., Bataan Province, *Copeland* 192; Lamao, Bataan Province, *Curran*, (7543). Mindanao : Camp Keithley, Lake Lanao, *Clemens* b, l; Todaya, Davao, 1200 m., *Copeland* 1275.

HAPALOPILUS MALAIENSIS (Cooke) Murrill. *Polystictus malaiensis*

Cooke, *Grevillea* 14: 13. 1885. (Type from Perak.) This is written *P. malacensis* on the type sheet at Kew and is so printed in Saccardo. The species is easily distinguished by its large pores.

Luzon : Lamao Forest Reserve, Bataan Province, *Curran*, (7394); Twin Peaks, Benguet Province, *Elmer* 6344. Mindanao : Mt. Apo, 530 m., Davao, *Copeland* 1155.

Hapalopilus Ramosii Murrill, sp. nov.

Pileus distorted by change of position of host, new pilei appearing in an imbricate fashion on both surfaces of the now erect older sporophore, sessile, dimidiate, corky, thickest behind, becoming very thin at the margin, convex or applanate above, 2-3 × 4-5 × 0.5-1 cm.; surface anoderm, slightly uneven, azonate, finely hirtose-tomentose, fulvous; margin acute, subentire, concolorous or slightly paler, sterile: context fulvous, homogeneous, 2-4 mm. thick; tubes grayish umbrinous within, 2-4 mm. long, mouths minute, 7 to a mm., subangular, regular, glistening, changing color with the direction of the light from dark fulvous to bay, edges thin, firm, entire: spores subglobose, smooth, hyaline, 3-4 μ ; hyphae ferruginous, 3 μ ; cystidia slender, fulvous, pointed, bent at the base, scanty, 15-25 × 5-6 μ .

Type collected on dead *Calophyllum Inophyllum* near Bosoboso, Rizal Province, Luzon, July, 1906, by Maximo Ramos, (1198).

HAPALOPILUS SUBRUBIDUS Murrill, Bull. Torrey Club 34: 470. 1907.

Luzon : Sablan, Benguet Province, *Elmer* 6134; Mt. Mariveles, Bataan Province, *Copeland* 166. Mindanao : Camp Keithley, Lake Lanao, *Clemens* ag; San Ramon, Zamboanga, *Copeland* 739. What appears to be a young, thin form of this species was collected by Curran and Merritt, (8970), on Mt. Maquiling, Laguna Province, Luzon, Oct. 23, 1907.

HEXAGONA CUCULLATA (Mont.) Murrill, Bull. Torrey Club 31:

332. 1904.

Batanes : *Fénix*, (3887).

Hexagona luzonensis Murrill, sp. nov.

Pileus flabelliform, tapering behind, $3 \times 4 \times 0.2-0.3$ cm.; surface isabelline, becoming grayish-tinted when dry, glabrous, radiate-striate, tessellate near the margin, which is rather firm, entire, opaque, strongly inflexed on drying: context soft, white to isabelline, 1 mm. thick behind, very thin near the margin, rather fragile; tubes large, decurrent, white to discolored, 1-2 mm. long, mouths $1-2 \times 1$ mm., edges thin, somewhat fimbriate: stipe lateral, short, thick, white, glabrous, 5×5 mm.

Type collected on dead wood at Lamao, Bataan Province, Luzon, September, 1907, by H. M. Curran, (7541).

Hexagona pertenuis Murrill, sp. nov.

Pileus flabelliform, cuneate behind, $2-3 \times 1.5-2.5 \times 0.05$ cm.; surface white, glabrous, faintly radiate-striate, tessellate near the margin, which is very thin, translucent, undulate, rarely toothed in places, fissured in age: context very thin, white, somewhat elastic when dry, but easily broken; tubes decurrent, white, becoming ochraceous, very shallow, of the usual elongated hexagonal form, mouths 0.5×0.25 mm., edges thin, slightly fimbriate: stipe very short, 3 mm. long, 1-2 mm. thick, lateral, cylindrical, concolorous, hardly umbilicate above.

Type collected on dead wood on Mt. Malaraya, Tayabas Province, Luzon, November, 1907, by H. M. Curran and M. L. Merritt, (8948).

HEXAGONA PHILIPPINENSIS (Berk.) Ricker, Phil. Jour. Sci. 1: Suppl. 4. 287. 1906. *Polyporus philippinensis* Berk. Lond. Jour. Bot. 1: 148. 1842. (Type from the Philippines, collected by Cuming.) *Favolus philippinensis* Sacc. Syll. Fung. 6: 393. 1888. Very similar to *P. grammacephalus* above, but tubes very much larger and elongated-hexagonal. *Leucoporus hirtolineatus* Pat., described from Java, can hardly be different from this species, judging from the description.

Luzon: Lamao, Bataan Province, *Copeland* 1407.

Inonotus Clemensiae Murrill, sp. nov.

Sporophore large, imbricate, uniformly dark fulvous-brown throughout; pileus sessile, dimidiate, conchate, rigid, fragile when dry, $5-7 \times 10-15 \times 1-1.5$ cm.; surface soft, anoderm, azonate, short-tomentose, slightly radiate-rugose; margin thick, fertile, irregularly notched or undulate: context spongy-fibrous, homogeneous, averaging 1 cm. in thickness; tubes 5 mm. long, mouths

angular, 2–3 to a mm., edges thin, entire: spores ellipsoid, smooth, pale fulvous, $6-9 \times 5-6 \mu$; hyphae thick, ferruginous; cystidia none.

Type collected on dead wood at Camp Keithley, Lake Lanao, Mindanao, September–October, 1907, by Mary S. Clemens, *as*.

INONOTUS FRUTICUM (B. & C.) Murrill, Bull. Torrey Club **31**: 601. 1904.

Balabac: *Mangubat*, (531).

LAETIPORUS SPECIOSUS (Batt.) Murrill, Bull. Torrey Club **31**: 607. 1904.

Luzon: Mt. Isidro, Pangasinan Province, *Curran & Merritt*, (8409).

MICROPORELLUS DEALBATUS (B. & C.) Murrill, Bull. Torrey Club **32**: 483. 1905. *P. Adami* Berk. (type from Ceylon) and *P. rasipes* Berk. (type from the Admiralty Islands) do not appear to differ from this species.

Luzon: Mount Tapulao, Zambales Province, 1000–1400 m., *Curran & Merritt*, (8203). Mindanao: Camp Keithley, Lake Lanao, *Clemens*.

MICROPORELLUS SUBDEALBATUS Murrill, Bull. Torrey Club **34**: 471. 1907.

Mindanao: Zamboanga, *Whitford & Hutchinson*, (9226).

NIGROPORUS DURUS (Jungh.) Murrill, Bull. Torrey Club **34**: 471. 1907.

Luzon: Mauban, Tayabas Province, *Curran*, (9588); Santa Maria Mavitac, Laguna Province, *Curran*, (8916).

NIGROPORUS VINOSUS Murrill, Bull. Torrey Club **32**: 361. 1905.

Polyporus badius Jungh. and *Polystictus Möllerianus* Sacc. are not distinct from this species. Specimens in the Bresadola herbarium are erroneously labeled *Polyporus carneo-niger* Berk, and at Berlin *Polyporus badius* Berk.

Luzon: Bosoboso, Rizal Province, *Ramos*, (2148); Mt. Mari-veles, Bataan Province, *Merrill*, (3695). Mindanao: Camp Keithley, Lake Lanao, *Clemens aa, h*.

POLYPORUS CELEBICUS P. Henn. Monsunia **1**: 12. *pl. 1. f. 5*. 1899.

It is difficult to separate this species from *P. Perula* in some

of its forms, although typical examples are quite easily distinguished. Many mycologists do not consider *P. celebicus* distinct.

Luzon : Bosoboso, Rizal Province, *Ramos*, (2154), Rizal Province, *Ramos*, (1861); Santa Maria Mavitac, Laguna Province, *Curran*, (8922), (8923); Mt. Maquiling, Laguna Province, *Curran & Merritt*, (8963); Lamao River, Bataan Province, *Copeland* 176. Mindanao : Davao, *Copeland* 489; Trail to Mt. Apo, 1666 m., Davao, *Copeland* 1066; Camp Keithley, Lake Lanao, *Clemens* *bd*, *be*. Negros : Gimagaan River, *Copeland* 6, 10. Batanes : *Fénix*, (3873).

POLYPORUS CORACINUS, Murrill, Bull. Torrey Club **34**: 471. 1907.

Negros : Gimagaan River, *Copeland* 18.

POLYPORUS ELEGANS (Bull.) Fr. Epicr. Myc. 440. 1838.

Mindanao : Camp Keithley, Lake Lanao, *Clemens* *al*.

POLYPORUS FISSUS Berk. Lond. Jour. Bot. **6**: 318. 1847.

Luzon : Santa Maria Mavitac, Laguna Province, *Curran*, (8914).

POLYPORUS FLABELLIFORMIS Kl. Linnaea **8**: 483. 1833.

Luzon : Baguio, Benguet Province, *Elmer* 6045.

POLYPORUS GRAMMOCEPHALUS Berk. Lond. Jour. Bot. **1**: 148. 1842.

Negros : Gimagaan River, *Copeland* 8. Luzon : Lamao River, Bataan Province, *Copeland* 160, *Curran*, (7531); Mount Maquiling, Laguna Province, *Merrill*, (5154); Bosoboso, Rizal Province, *Ramos*, (1858), (4622); Sablan, Benguet Province, *Elmer* 6185. Balabac : *Mangubat*, (532). Mindanao, Camp Keithley, Lake Lamao, *Clemens* *am*.

POLYPORUS PALENSIS Murrill, Bull. Torrey Club **34**: 472. 1907.

Luzon : Sablan, Benguet Province, *Elmer* 6184; Lamao River, Bataan Province, *Copeland* 153. Negros : Gimagaan River, *Copeland* 20.

POLYPORUS PERULA (Beauv.) Fr. Epicr. 437. 1838. This species is very abundant and variable. One form of it (Luzon : Mount Maquiling, Laguna Province, *Curran & Merritt*, (8965)) is decidedly tomentose in appearance, with narrow glabrous zones such as occur in young specimens of *Coriolus versicolor*.

Luzon: Lamao River, 115 m., *Copeland E*, 178; Lamao River, Bataan Province, *Copeland 180*; Lamao Forest Reserve, Bataan Province, *Foxworthy*, (1583); Mt. Mariveles, 800 m., Bataan Province, *Copeland 183*; Benguet Province, *Elmer 6146*; Baguio, Benguet Province, *Elmer 5940, 6046*; Sablan, Benguet Province, *Elmer 6133, 6182*; Santa Maria Mavitac, Laguna Province, *Curran*, (8924), (8925); Mt. Maquiling, Laguna Province, *Merrill*, (5152), *Curran & Merritt*, (8963), (8967), (8968); Bosoboso, Rizal Province, *Ramos*, (2147), (2152); Montalban, Rizal Province, *Merrill*, (5088); Mt. Arayat, Pampanga Province, *Merrill*, (5032); Mt. Malaraya, Tayabas Province, *Curran & Merritt*, (8943), (8961); Batangas Province, *Curran & Merritt*, (8937); Mt. Tapulao, 1000–1400 m., Zambales Province, *Curran & Merritt*, (8204), (8205); Zambales Province, *Curran & Merritt*, (8209); Paete-Piapi, Tayabas and Laguna Provinces, *Curran*, (9642), (9645). Palawan: Victoria Peak, *Curran*, (7485), (7486), (7487). Batanes: *Fénix*, (3878), (3882), (3886). Balabac: *Mangubat*, (530). Mindoro: *Merritt*, (8815); Mt. Halcon, *Merrill*, (6115). Mindanao: Zamboanga, *Whitford & Hutchinson*, (9236); Catalonan, Davao, *Copeland 926*; Mt. Apo, 2000 m., Davao, *Copeland 1154*; Davao, *Copeland 151*, 707; Camp Keithley, Lake Lanao, *Clemens ab, ad, bh, ch, cj*, “*K*,” *n, o, t, z*.

PYCNOPORUS SANGUINEUS (L.) Murrill, Bull. Torrey Club **31**: 421.

1904.

Camiguin: Babuyanes, *Fénix*, (4154), (4164), (4175). Mindanao: Camp Keithley, Lake Lanao, *Clemens bc, ci*; Davao, *Copeland C*. Negros: Gimagaan River, *Copeland 3, 7*. Balabac: *Mangubat*, (537). Batanes: *Fénix*, (3875). Luzon: Pangasinan Province, *Ramos*, (4980); Montalban, Rizal Province, *Merrill*, (5083); Bosoboso, Rizal Province, *Ramos*, (1199), (2155); Manila, *Copeland 40*; Lamao, Bataan Province, *Curran*, (7536); Subig, Zambales Province, *Curran*, (7021), (7022); Santa Maria Mavitac, Laguna Province, *Curran*, (8921); Rizal Province, *Ramos*, (1863). Palmas: *Merrill*, (5371).

RIGIDOPORUS SURINAMENSIS (Miq.) Murrill, Bull. Torrey Club **34**: 473. 1907.

Luzon: Mt. Maquiling, Laguna Province, *Curran & Merritt*,

(8969); Santa Maria Mavitac, Laguna Province, *Curran*, (8917). Mindanao: Camp Keithley, Lake Lanao, *Clemens ai*.

***Trametes conglobata* Murrill, sp. nov.**

Pileus consisting of several lobes closely imbricated in a rounded sporophore $4 \times 7 \times 5$ cm.; lobes rigid, convex above, plane below, dimidiate, $1-2 \times 1-4 \times 0.5-2$ cm.; surface uneven, opaque, dirty white, subglabrous, anoderm, azonate; margin obtuse, undulate, concolorous: context white or pallid, multizonate, 0.4-1.5 cm. thick; tubes about 1 mm. long, dirty white, thin-walled, mouths angular, slightly irregular, 5-6 to a mm., edges entire to undulate: spores ovoid to subglobose, smooth, hyaline, $3-4 \mu$ long; hyphae hyaline, 3μ ; cystidia none.

Type collected on deadwood at Camp Keithley, Lake Lanao, Mindanao, September-October, 1907, by Mary S. Clemens.

***Trametes insularis* Murrill, sp. nov.**

Pileus sessile, dimidiate, imbricate, irregular, thickish behind, decurrent, $2-4 \times 3-7 \times 1-1.5$ cm.; surface rugose, anoderm, glabrous, black behind, light reddish brown in front; margin obtuse, sterile, ochraceous, entire: context white to pallid, woody, zonate, 1.5-3 mm. thick; tubes 1 cm. long behind, becoming gradually shorter toward the margin, the section appearing triangular, concolorous with the context, mouths grayish-isabelline, subcircular, 3 to a mm., edges thick, firm, entire, becoming thinner at maturity: spores subglobose, smooth, hyaline, $4-5 \mu$ long; hyphae hyaline, $3-4 \mu$; cystidia none.

Type collected on prostrate logs of *Pinus insularis* at Baguio, 1500 m., Benguet Province, Luzon, October-November, 1905, by E. D. Merrill, (5001).

TRAMETES MULLERI Berk. Jour. Linn. Soc. Bot. 10: 320. 1868.

This species has the appearance and habit of *Daedalea*, but the tubes are never daedaleoid. *Trametes conchata* Berk., described from the Philippines, appears to be a variety of this species with sordid context and tubes, such as often occurs in *Daedalea amanitoides*.

Luzon: Zambales Province, *Curran*, (7023), (7026); Lamao River, Bataan Province, *Copeland* 165; Bosoboso, Rizal Province, *Curran*, (9527); Tarlac Province, *Merrill*, (3602). Camiguin: Babuyan, *Fenix*, (4176). Mindanao: Camp Keithley, Lake Lanao, *Clemens an* and one other collection.

Tyromyces Merrittii Murrill, sp. nov.

Pileus imbricate-multiplex, the lobes few in number and attached together in a prolonged stipitiform base, each lobe flabelliform, with cuneate base, $7-9 \times 7-9 \times 0.5$ cm.; surface radiate-rugose and roughened with prominences of various sizes, sordid white, opaque, very minutely tomentose; margin irregular, variously lobed, rather thick, fertile, slightly deflexed: context fleshy-fibrous, very brittle when dry, milk-white, 2 mm. thick; tubes 3 mm. long, slender, nearly white within, mouths grayish-white, glistening, discolored in places, regular, thin-walled, 3 to a mm., edges firm, entire: spores ovoid, curved, smooth, hyaline, $5-6 \times 3 \mu$; hyphae very fragile, hyaline, $4-5 \mu$; cystidia none.

Type collected on dead wood on Mt. Maquiling, Batangas Province, Luzon, November, 1907, by H. M. Curran and M. L. Merritt, (8939).

Tyromyces subchioneus Murrill, sp. nov.

Pileus sessile, dimidiate, applanate, fleshy-tough to fragile, $2 \times 4 \times 0.2$ cm.; surface smooth, glabrous, grayish isabelline, wrinkled when dry; margin entire, thin, sterile and abruptly deflexed: context white, homogeneous, fragile, 1 mm. thick when dry; tubes very distinct from the context in color, dark yellowish gray within, 1 mm. long, mouths subcircular, regular, grayish, glistening, $5-6$ to a mm., edges entire, thick at first, becoming thinner at maturity: spores oblong, ellipsoid, smooth, hyaline, $5-6 \times 2 \mu$; hyphae hyaline, $3-4 \mu$; cystidia none.

Type collected on dead wood on Mt. Apo, 2160 m., Davao, Mindanao, April 20, 1904, by E. B. Copeland, 1074.

Tyromyces unguliformis Murrill, sp. nov.

Pileus compressed-ungulate, plane below, much thicker behind, $5 \times 8 \times 1-3$ cm.; surface anoderm, azonate, somewhat tuberculose, nearly glabrous, milk-white, opaque; margin abruptly acute, narrowly sterile, concolorous, entire: context white, fragile when dry, homogeneous, $5-8$ mm. thick; tubes white or yellowish within, 1 cm. long behind, gradually shorter towards the margin, slender, mouths circular, regular, 4 to a mm., somewhat glistening, white with a silvery sheen, edges thick, entire: spores smooth, ovoid, hyaline, $3 \times 2 \mu$; hyphae hyaline, 3μ ; cystidia none.

Type collected on dead wood on Balabac Island, March-April, 1906, by L. Mangubat, (533).

Whitfordia Murrill, gen. nov.

Hymenophore annual, epixylous, stipitate; surface glabrous, anoderm: context brown, fibrous to corky; tubes minute, cylindrical: spores hyaline: stipe lateral, black.

Type species, *Fomes Warburgianus* P. Henn.

Whitfordia Warburgiana (P. Henn.) Murrill. *Fomes Warburgianus* P. Henn.; *Monsumia* 1: 10. *pl. 1. f. 3.* 1900. *Coriopsis aneba* (Berk.) Murrill, *Bull. Torrey Club* 34: 466. 1907. Specimens sent in previously were too young and aborted to determine accurately. The context of this species is rather pale when young, becoming blacker with age.

Lumbacan: *Merrill*, (5280). Negros: Gimagaan River, *Copeland* 12, 17. Luzon: Mount Maquiling, Laguna Province, *Merrill*, (5150). Mindoro: Bongabong River, *Whitford* 1436. Mindanao: Sibulan River, Davao, *Copeland* 1308; Malita, Davao, *Copeland* 655.

Tribe FOMITEAE

Amauroderma asperulatum Murrill, sp. nov.

Pileus reniform to nearly circular, thick, corky, rigid, convexo-concave, 5 cm. in diameter, 1.5 cm. thick; surface glabrous, avellaneous with two or three dark brown zones, thinly encrusted, neither laccate nor shining, rugose when dry; margin thick, undulate, sulcate: context thin, 1–2 mm., white, punky-fibrous, homogeneous; tubes very long and slender, 1–1.5 cm., wood-brown, mouths angular, 3 to a mm., edges thin, entire: spores copious, ovoid, deep yellowish brown, averaging $18 \times 12 \mu$, studded with immense warts: stipe ascending, laterally attached, cylindrical, equal, slightly expanding above, resembling the pileus in surface, harder in substance, 5 cm. long, 6–7 mm. thick.

Type collected on the base of dead *Parkia* (?), at Lamao, Bataan Province, Luzon, February 2, 1904, by E. B. Copeland.

Amauroderma bataanense Murrill, sp. nov.

Pileus circular in outline, nearly plane, rigid, corky, $5 \times 5 \times 0.5$ cm.; surface much wrinkled both concentrically and radially in drying, sulcate, faintly zonate, opaque, avellaneous to grayish brown, paler toward the margin, thinly encrusted, glabrous; margin undulate, truncate; context white or nearly so, 3 mm. thick at the center, very thin at the margin, homogeneous, firm; tubes fuscous-brown within and without, 2–3 mm. long, mouths rather large and angular at maturity, 3 to a mm., edges thin, firm,

entire: spores globose, very deep brown, thick-walled, lightly asperulate, copious, $12-14\ \mu$: stipe central, subcylindrical, enlarged at the surface of the ground, tapering and radicate below, corticated, isabelline, woody, 6×0.6 cm.

Type collected on decaying underground roots in the region of Lamao, Bataan Province, Luzon, September, 1907, by H. M. Curran, (7528).

Amauroderma Clemensiae Murrill, sp. nov.

Pileus thin, tough, flexible, flabelliform to subcircular, conchate, deeply depressed behind, $5 \times 6 \times 0.2-0.3$ cm.; surface glabrous, nearly smooth, multizonate, faintly radiate-rugose when dry, brown behind, avellaneous in front, with darker zones; margin very thin, entire to undulate, blackish and inflexed on drying: context punky-fibrous, pale isabelline, $0.5-1.5$ mm. thick; tubes $1.5-2.5$ mm. long, pallid within, mouths avellaneous, umbrinous when bruised, regular, glistening $4-5$ to a mm., edges thin, entire, corky: spores subglobose to ovoid, smooth, faint yellowish brown, copious, $5-7\ \mu$: stipe exactly lateral, curved, cylindrical, nearly even, slightly enlarged at the base and somewhat compressed where it joins the pileus, resembling the pileus in surface and context, but uniformly light brown in color and almost woody, $8 \times 0.6-0.7$ cm.

Type collected on dead roots near Camp Keithley, Lake Lanao, Mindanao, September-October, 1907, by Mary S. Clemens.

AMAURODERMA ELMERIANUM Murrill, Bull. Torrey Club **34**: 475. 1907.

Mindanao: Zamboanga, *Whitford & Hutchinson*, (9288).

Amauroderma Ramosii Murrill, sp. nov.

Pileus round-reniform, deeply incised at the hilum, where the stipe is attached, rigid, corky, slightly convex, $3 \times 4 \times 0.5$ cm.; surface thinly encrusted, opaque, glabrous, very slightly sulcate-zonate, dark gray or blackish, much wrinkled on drying; margin thick, obliquely truncate, delicately penciled, undulate: context $1-2$ mm. behind, very thin in front, nearly white, punky-fibrous; tubes $4-5$ mm. long, slender, avellaneous, mouths concolorous or darker, regular, circular, 5 to a mm., edges very thick, entire: spores subglobose, finely asperulate, light yellowish brown, $8-10\ \mu$: stipe laterally attached, suberect, curved and somewhat compressed, corticated, glabrous, paler than the pileus, woody, radicate and branched below, 7×0.4 cm.

Type collected on dead roots near Bosoboso, Rizal Province, Luzon, July, 1906, by Maximo Ramos, (1211).

ELFVINGIA ELMERI Murrill, Bull. Torrey Club **34**: 476. 1907.

Luzon : Subig, Zambales Province, *Curran*, (7024). Mindanao : Camp Keithley, Lake Lanao, *Clemens ar* and one other collection.

ELFVINGIA TORNATA (Pers.) Murrill, Bull. Torrey Club **30**: 301.

1903. *Ganoderma subtornatum* Murrill is probably only a form of this species having an excess of resin. The two genera come very close together here.

Mindanao : Davao, *Copeland* 380, 500 ; Todaya, Davao, 1400 m., *Copeland*, 900 m., *Copeland* 1223 ; Camp Keithley, Lake Lanao, *Clemens i, y*, and one other collection. Luzon : Mount Maquiling, Laguna Province, *Merrill*, (5155) ; Bosoboso, Rizal Province, *Ramos*, (1193), (1209), (1216) ; Mt. Mariveles, *Copeland* 167, 190 ; Mt. Malaraya, Tayabas Province, *Curran & Merritt*, (8944) ; Zambales Province, *Curran & Merritt*, (8203) ; Rizal Province, *Foxworthy*, (137) ; Montalban, Rizal Province, *Merrill*, (5087) ; Lamao Forest Reserve, Bataan Province, *Curran*, (7387) ; Panai, Benguet Province, *Elmer*, (5002) ; Lamao River, Bataan Province, *Copeland* 181, 189, 193 ; Baguio, Benguet Province, *Elmer* 6069 ; Santa Maria Mavitac, Laguna Province, *Curran*, (8932). Balabac : *Mangubat*, (536). Camiguin : Babuyan, *Fénix*, (4169), (4173), (4178). Palmas : *Merrill*, (5370).

FOMES AUBERIANUS (Mont.) Murrill, Bull. Torrey Club **32**: 491.

1905.

Mindanao : Camp Keithley, Lake Lanao, *Clemens au, bg*, and one other collection. Negros : Gimagaan River, *Copeland* 13.

FOMES LIGNEUS (Berk.) Cooke, Grevillea **13**: 119. 1884.

Mindanao : Camp Keithley, Lake Lanao, *Clemens "Q"*.

FOMES LUZONENSIS Murrill, Bull. Torrey Club **34**: 476. 1907.

Luzon : Mt. Mariveles, Bataan Province, *Copeland* 182, on living *Dipterocarpus*. These specimens are too young to show typical surface markings or a stratified hymenium.

FOMES UNGULATUS (Schaeff.) Sacc. Syll. Fung. **6**: 167. 1888.

Luzon : Baguio, Benguet Province, *Elmer* 5945. No. 5238 (Luzon : Baguio, Benguet Province, *Curran*) appears to be a young and much discolored specimen of this species.

Fomes subresinosus Murrill, sp. nov.

Pileus semicampanulate, attached by an elongated umbo, concave below, woody, $6 \times 8 \times 1$ cm.; surface glabrous, somewhat resinous, thinly encrusted, very rugose when dry, slightly sulcate, conspicuously banded with broad brown and shining-black zones; margin thick, abruptly acute and deflexed, entire or undulate, concolorous: context white, slightly pallid when dry, woody-fibrous, 3–5 mm. thick; tubes 5–8 mm. long, slender, brownish flesh-colored within when dry, mouths circular and whitish when young, becoming angular and concolorous at maturity, 3–4 to a mm., edges at first thick, becoming thin and lacerate: spores globose or subglobose, smooth, hyaline, $3-4 \mu$; hyphae hyaline; cystidia none.

Type collected on dead wood in the Lamao Forest Reserve, Bataan Province, Luzon, October, 1906, by F. W. Foxworthy, (1628). Also collected at Bosoboso, Rizal Province, Luzon, July, 1906, by Maximo Ramos, (1215).

Fomes subungulatus Murrill, sp. nov.

Pileus sessile, dimidiate, broadly attached, the point of attachment bounded by a narrow black zone, rigid, convex above, concave below, $6 \times 8 \times 1-2$ cm.; surface sulcate, glabrous, anoderm, slightly tuberculose, isabelline, suffused in places with reddish brown; margin rounded, thick, entire: context thick, 5–8 mm., isabelline, zonate, soft-corky; tubes whitish within, slender, 3–5 mm. long, not distinctly stratified, mouths small, white to isabelline, perfectly circular, 5 to a mm., edges thick, obtuse, entire: spores ovoid, smooth, hyaline, $5 \times 3.5 \mu$; hyphae hyaline, 5–6 μ ; cystidia none.

Type collected on prostrate logs of *Pinus insularis* at Baguio, 1500 m., Benguet Province, Luzon, October–November, 1905, by E. D. Merrill, (5005).

GANODERMA AMBOINENSE (Lam.) Pat. Bull. Soc. Myc. Fr. 5: 70. 1889.

Luzon: Lamao Forest Reserve, Bataan Province, *Curran*, (7395); Lamao, Bataan Province, *Copeland* 1365; Bosoboso, Rizal Province, *Ramos*, (2157). Negros: Gimagaan River, *Copeland* 16.

Ganoderma balabacense Murrill, sp. nov.

Pileus ascending from a short, thick tubercle, flabelliform to nearly circular, depressed at the center or behind, very concave below, $15 \times 15 \times 2$ cm.; surface glabrous, thinly encrusted,

opaque brown behind, laccate, shining and dark reddish brown in front, rugose and roughly tuberculose, sulcate; margin abruptly acute, yellowish, sterile, entire: context ferruginous above, fulvous below, woody-fibrous, 1 cm. thick; tubes cinereous-fuscos, slender, 1 cm. long, mouths circular, regular, 3-4 to a mm., whitish when young, concolorous at maturity, edges thick, entire: spores ovoid, finely asperulate, pale brownish, $8-9 \times 4-5 \mu$; hyphae ferruginous-fulvous; cystidia none.

Type collected on the island of Balabac, March-April, 1906, by L. Mangubat, (539).

Ganoderma Currani Murrill, sp. nov.

Pileus corky, rigid, reniform, convex above, concave below, slightly depressed behind, attached at the hilum to a very long stipe, $3-4 \times 5-6 \times 0.5$ cm.; surface glabrous, laccate, shining, reddish brown, shallowly concentrically sulcate, radiate-rugose; margin thick, undulate, concolorous: context fulvous, punky, 1-2 mm. thick; tubes slender, 3-4 mm. long at the thickest part of the pileus, grayish fuscous, mouths becoming concolorous, circular to angular, 4-5 to a mm.: spores ovoid, distinctly asperulate, deep fulvous, copious, $8-10 \times 6-7 \mu$: stipe erect, sublaterally attached, nearly cylindrical, slightly irregular, equal, laccate, glabrous, encrusted, 15-20 cm. long, 5-10 mm. thick.

Type collected on dead wood at Lamao, Bataan Province, Luzon, September, 1907, by H. M. Curran, (7544).

NIGROFOMES MELANOPORUS (Mont.) Murrill, Bull. Torrey Club **31**: 425. 1904.

Luzon: Lamao, Bataan Province, Curran, (7540).

PYROPOLYPORUS ALBOMARGINATUS (Lév.) Murrill, Bull. Torrey Club **34**: 478. 1907. *Polyporus ochrocroceus* P. Henn. (Mon-sunia **1**: 145. 1899.) exactly corresponds to this species, judging from the description, and should be treated as a synonym.

Luzon: Bosoboso, Rizal Province, Ramos, (2149), (2150), (2156); Lamao River, Bataan Province, Copeland 173; Mt. Mariveles, Bataan Province, Merrill, (3698). Mindanao: Mt. Apo, Davao, Copeland 1077. A specimen collected at Camp Keithley by Mrs. Clemens agrees well with *Fomes pyrrhocreas* Cooke, which I have considered synonymous with *P. albomarginatus*. It may be that further collections will prove them distinct species.

PYROPOLYPORUS CALIGINOSUS (Berk.) Murrill, Bull. Torrey Club

34: 478. 1907.

Mindanao: Camp Keithley, Lake Lanao, *Clemens ak, d, f*.

PYROPOLYPORUS ENDOTHEIUS (Berk.) Murrill, Bull. Torrey Club

34: 478. 1907. *Pyropolyporus Williamsii* Murrill, Bull.

Torrey Club 34: 479. 1907. A quantity of good material shows gradations between the two forms distinguished as species in a former paper. When young the context is bright-colored, becoming darker and thinner with age.

Mindoro: Mt. Halcon, *Merrill*, (6120). Camiguin: Babuyanes, *Fénix*, (4177). Mindanao: Camp Keithley, Lake Lanao, *Clemens cf*, and one other collection. Luzon: Montalban, Rizal Province, *Merrill*, (5089); Bosoboso, Rizal Province, *Curran*, (9526); Mt. Malaraya, Tayabas Province, *Curran & Merritt*, (8950).

PYROPOLYPORUS FASTUOSUS (Lév.) Murrill, Bull. Torrey Club 34:

479. 1907.

Mindoro: Mt. Halcon, *Merrill*, (6114). Luzon: Antipolo, Rizal Province, *Curran*, (7044). Camiguin: Babuyanes, *Fénix*, (4171). Mindanao: Zamboanga, *Whitford & Hutchinson*, (8942); Camp Keithley, Lake Lanao, *Clemens bi, p, u, x*.

PYROPOLYPORUS LAMAENSIS Murrill, Bull. Torrey Club 34: 479.

1907.

Luzon: Mt. Mariveles, Bataan Province, *Copeland 145*. Negros: Gimagaan River, *Copeland 15*. Mindanao: Catalonan, Davao, *Copeland 922*.

PYROPOLYPORUS PECTINATUS (Kl.) Murrill, Bull. Torrey Club 34:

479. 1907. *Fomes substygius* B. & Br., from Ceylon, is considerably larger than the usual form of this species, but it does not appear to be specifically distinct. *Polyporus Hasskarlii* Lév., described from Java in 1844, is identical with Klotsch's species described from the East Indies eleven years previously.

Luzon: Santa Maria Mavitac, Laguna Province, *Curran*, (8912); Lamao, Bataan Province, *Curran*, (7520). Palawan: Ewiig River, *Merrill*, (3586).

Pyropolyporus subextensus Murrill, sp. nov.

Pileus large, woody, sessile, dimidiate, applanate, slightly convex below, $7-8 \times 10-12 \times 1$ cm.; surface rough, slightly sulcate, glabrous, thinly encrusted, opaque brown; margin slightly lobed, very obtuse, fulvous, sterile: context ferruginous, multizonate, woody, nearly 1 cm. thick; tubes short, 1-2 mm. long each season, fulvous in older layers, grayish fuscous in those of recent growth, mouths minute, fulvous, circular, thick-walled, 7-8 to a mm., edges thick, entire: hyphae ferruginous, $3-4 \mu$; cystidia flask-shaped or irregular in outline, pointed, fulvous, very abundant, $15-30 \mu$ long, $8-10 \mu$ thick at the base.

Type collected on dead wood at Camp Keithley, Lake Lanao, Mindanao, September, 1907, by Mary S. Clemens. Also collected on Mt. Apo, 2000 m., Davao, Mindanao, April 22, 1904, by E. B. Copeland, "*E.*"

Pyropolyporus tenuissimus Murrill, sp. nov.

Pileus thin, woody, rigid, dimidiate, concave above, convex below, decurrent behind, $1-1.5 \times 4-5 \times 0.1-0.2$ cm.; surface rough, spongy-tomentose to subglabrous, neither sulcate nor zonate, fulvous to fuliginous, thicker and more spongy near the margin, which is fulvous, finely tomentose, rather thick, undulate: context fulvous, very thin, punky to corky; tubes stratified, 0.5 mm. or less long each season, cinereous-fuscous within, mouths whitish-stuffed when young, minute, 6 to a mm., circular, regular, avellaneous at first, becoming darker at maturity, edges thick, entire: spores globose, smooth, hyaline, copious, $3-4 \mu$; hyphae melleous, $2-3 \mu$; cystidia fulvous, cuspidate, scanty, $15-20 \mu$ long, $5-7 \mu$ thick at the base.

Type collected on dead wood in Davao, Mindanao, March 13, 1904, by E. B. Copeland, 497.

Pyropolyporus tricolor Murrill, sp. nov.

Pileus very large, applanate, comparatively thin, rigid, woody, $15 \times 25 \times 1-2$ cm.; surface roughly tuberculose and ridged, irregularly sulcate, thinly encrusted, glabrous, dark brown to dull black, rimose in dried specimens; margin thin, obtuse, reddish, subentire: context woody, brick-red, with white dendroid markings, 5-8 mm. thick; tubes 4-5 mm. long each season, brick-red in the older layers, yellowish red with white lines in recent growths, mouths minute, regular, circular, glistening, melleous, 4 to a mm., edges rather thick, entire: spores subglobose, smooth, hyaline, with smoky brownish, rather thin walls, $5-6 \mu$; hyphae melleous, $3-4 \mu$; cystidia none.

Type collected on dead wood at Santa Maria Mavitac, Laguna Province, Luzon, February, 1908, by H. M. Curran, (8933).

Tribe DAEDALEAE

CYCLOMYCES FUSCUS Fr. *Linnaea* 5: 512. *pl.* 11. *f.* 3. 1830.
(Type from Mauritius.)

Luzon: Mt. Malaraya, Tayabas Province, *Curran & Merritt*, (8949); Benguet Province, *Elmer* 6048.

DAEDALEA AMANTOIDES Beauv. *Fl. Owar.* 1: 44. 1805.

Luzon: Mt. Malaraya, Tayabas Province, *Curran & Merritt*, (8945), (8953); Bosoboso; Rizal Province, *Ramos*, (1191), (1207), (4619), (4623); Rizal Province, *Ramos*, (1867); Bagac, Bataan Province, *Curran*, (6494); Lamao Forest Reserve, Bataan Province, (7389); Lamao, Bataan Province, *Curran*, (7542); Panai, Benguet Province, *Merrill*, (5004); Montalban, Rizal Province, *Merrill*, (5091); Twin Peaks, Benguet Province, *Elmer* 6354. Negros: Gimagaan River, *Copeland* 21. Mindoro: Bongabong River, *Whitford* 1443. Mindanao: Davao, *Copeland* 490; Camp Keithley, Lake Lanao, *Clemens* g, m, and one other collection.

DAEDALEA HOBSONI Berk. *Jour. Linn. Soc. Bot.* 13: 165. 1873.

Balabac: *Mangubat*, (510). Luzon: Bagac, Bataan Province, *Curran*, (6493); Montalban, Rizal Province, *Merrill*, (5084); Moron, Bataan Province, *Curran*, (6492); Lamao, Bataan Province, *Copeland* 186, 187, 188; Bauang, Union Province, *Elmer* 5745; Santa Maria Mavitac, Laguna Province, *Curran*, (8920), (8931); Cavite Province, *Curran & Merritt*, (8941); Zambales Province, *Curran*, (7027); Mt. Mariveles, Bataan Province, *Merrill*, (3696); Rizal Province, *Foxworthy*, (119), *Ramos*, (1868); Antipolo, Rizal Province, *Curran*, (7041); Manila, *Copeland* 42. Mindoro: Bongabong River, *Whitford* 1419. Mindanao: Zamboanga, *Whitford & Hutchinson*, (9225); Camp Keithley, Lake Lanao, *Clemens* "O," q.

Daedalea isabellina Murrill, sp. nov.

Pileus thin, corky, slightly flexible, sessile, dimidiate, applanate above, convex below, thickest behind, 5 × 9 × 0.5–1.5 cm.; surface glabrous, faintly multizonate in front, rough and warty behind, somewhat radiate-rugose, isabelline; margin thin, un-

dulate, subconcolorous: context homogeneous, corky, isabelline, 1–2 mm. thick; hymenium very irregular, porose-daedaleoid behind and lamellate nearly to the margin, where the furrows are forked or additional ones inserted and the edges are thick and close; furrows mostly radial, thin-walled, 1–1.5 mm. wide, 1.3 cm. deep behind, becoming gradually shallower towards the margin, edges entire or undulate, some of them splitting into broad, flat plates with sharply toothed lower margins: spores ovoid, smooth, hyaline, copious, $5-6 \times 3-4 \mu$; hyphae slightly yellowish, $3-4 \mu$; cystidia none.

Type collected on dead wood at Sablan, Benguet Province, Luzon, April, 1904, by A. D. E. Elmer, 6186.

Daedalea subconfragosa Murrill, sp. nov.

Pileus sessile, reniform, thin, flexible, conchate, $6 \times 11 \times 0.3$ cm.; surface glabrous, faintly multizonate, pale wood-color; margin acute, fertile, concolorous, entire or undulate: context ochraceous, punky, less than 1 mm. thick; tubes pale wood-color within and without, 2–3 mm. long, tough, mouths much elongated radially, variable in size, $1-6 \times 0.5-1$ mm., edges thin, undulate or irregularly toothed: spores ellipsoidal, smooth, hyaline, $5-6 \times 3-4 \mu$; hyphae hyaline, $3-4 \mu$; cystidia none.

Type collected on dead wood in Rizal Province, Luzon, January, 1906, by F. W. Foxworthy, (22).

Gloeophyllum edule Murrill, Bull. Torrey Club **34**: 480. 1907.

Luzon: Baguio, Benguet Province, *Elmer, Merrill*, (5000); Trinidad, Benguet Province, *Elmer* 5942; Zambales Province, *Curran*, (7019).

Gloeophyllum nigrozonatum Murrill, sp. nov.

Pileus rigid, subtriangular, narrower behind, sessile, convex above, plane below, $7 \times 6 \times 1-2$ cm.; surface glabrous, nearly smooth, cinereous behind, isabelline in front, with a broad black zone one third the distance from the point of attachment and two or three indistinct brownish zones near the margin, which is thick, rounded, sterile, faintly tomentose, subentire, isabelline or slightly avellaneous: context ferruginous, corky, homogeneous, 5 mm. thick; tubes 1 mm. long behind and at the center, avellaneous, with fulvous dissepiments, mouths ferruginous to cinereous-fuscos, very uneven and irregular in size and shape, daedaleoid and $1-2 \times 2-5$ mm. behind, with irpiciform edges, poroid and 1 mm. or less at the margin, with edges entire: spores ovoid, smooth, hyaline, scanty, $5 \times 3.5 \mu$; hyphae ferruginous, 3μ ; cystidia none.

Type collected on dead wood near Baguio, Benguet Province, Luzon, March, 1904, by A. D. E. Elmer, 5941.

GLOEOPHYLLUM STRIATUM (Sw.) Murrill, Bull. Torrey Club 32: 370. 1905.

Mindanao: Davao, *Copeland D*, 525. Negros: Gimagaan River, *Copeland*.

Lenzites Clemensiae Murrill, sp. nov.

Pileus flabelliform, applanate above, convex below, very slightly flexible, tapering to a very small point of attachment behind, $6 \times 7 \times 1-1.5$ cm.; surface marked with a few broad concentric furrows, minutely reticulated, pure white and regularly radiate-grooved on the marginal band 1.5 cm. broad, grayish-discolored and almost devoid of reticulations and grooves behind; margin subentire, very thick, the context projecting so as to form a very slight edge above the rounded ends of the gills: context milk-white, 1 mm. thick; furrows very deep, reaching 1 cm. or more, most of them forked once, 2 mm. broad, dissepiments entire, obtuse, firm, slightly creameous.

Type collected on dead wood at Camp Keithley, Lake Lanao, Mindanao, September, 1907, by Mary S. Clemens, *cc*.

Lenzites submurina Murrill, sp. nov.

Pileus thin, tough, slightly flexible, dimidiate, sessile, applanate above and below, $5 \times 9 \times 1$ cm.; surface glabrous, narrowly sulcate and avellaneous-isabelline in front, broadly sulcate and murinous behind; margin thin, undulate: context white, very distinct in color from the isabelline dissepiments, very thin at the margin, increasing to 3 mm. thick behind; furrows lamellate, 1 mm. wide, reaching 5 mm. in depth, edges entire or slightly undulate, not splitting with age.

Type collected on dead wood at Camp Keithley, Lake Lanao, Mindanao, September–October, 1907, by Mary S. Clemens, *aj*.

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